Coalition to Mitigate the Impact of Sea Level Rise

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Development in the 4-foot sea level rise zones is continuing as if Climate Change and Sea Level Rise are a myth.

Immediate Action Required:

HCDA and the County of Honolulu shall pause all permitting of construction in the 4-foot sea level rise inundation zone as indicated on the NOAA 4-foot sea level rise (SLR) map for Oahu, immediately focusing on the most affected low-lying areas from Waikiki to Honolulu (map).

Any development proposed in the 4-foot SLR zone and beyond shall include a truly focused environmental assessment that evaluates the risks associated with Climate Change and SLR induced multi-mechanism flooding and also focusses on evaluation of structural stability of foundations and expected infrastructure support (water, electricity, sewer, storm drain runoff, etc.) for the approximately 50-75 year expected lifespans. "No build" or "No rebuild" zones could then be further refined, even extended.

Sea level rise adaptation solutions must include all shareholders. Corporations (hotels, etc.) shall share with public agencies their internal information on sea level rise impacts and resiliency requirements.

County, State and Federal agencies shall immediately identify and develop land for truly affordable rental housing and also possible future relocation of the most vulnerable population. Food Security must also be greatly accelerated through supporting small scale farming and "backyard" food production.

Condominium Associations shall include in their reserve studies maintenance and possible "resiliency" cost requirements pertaining to expected sea level rise.

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Property owners selling within the present NOAA 4-foot SLR zone shall provide buyers with a factual waiver that discloses the present and future risks, costs such as Condominium assessments, and responsibilities that come with living in the area (Senate Bill 474, approved by the legislature on the last day of the 2021 session, requires anyone selling property to disclose if it is in an area exposed to the likely effects of a predicted 3.2-foot [1 meter] sea level rise over the next thirty years [unrealistic in most areas] in reference to the State of Hawaii Sea Level Rise Viewer).

Facts Matter:

While sea level rise resiliency planning in Hawaii is largely still based on no more than 3 feet of sea level rise, extensive research indicates that sea level rise may greatly exceed this threshold if global warming keeps increasing unchecked as it is now.

The February 15, 2022 NOAA Interagency Sea Level Rise and Flood Hazard Report, updated after five years and based on emission of greenhouse gases to date of 1.1 degree Celsius (or 2 degree Fahrenheit) beyond pre-industrial levels that drive global warming, unsurprisingly predicts up to 12" sea level rise by 2050 and 24" by 2100 for low lying Honolulu. Other States of the US more affected by sea level rise than Hawaii such as parts of Texas and Louisiana could see an increase in excess of 18" (0.45 meters) by mid-century. By 2050, "moderate" (typically damaging) flooding is already expected to occur, on average, more than 10 times as often as it does today. The report also succinctly states Failing to curb future emissions could cause an additional 1.5 - 5 feet (0.5 - 1.5 meters) of rise for a total of 3.5 - 7 feet (1.1 - 2.1 meters) by the end of this century.

The recent 2-28-2022 UN report on climate change rang the alarm bells even more loudly by stating that the dangers of climate change are mounting so rapidly that they could soon overwhelm the ability of both nature and humanity to adapt unless greenhouse gas emissions are quickly reduced. Adaptation may be just an illusionary approach unless global warming can be stopped at 1.5 degree Celsius as it is feared that catastrophic, irreversible climate changes may be triggered past this point. This would require countries to largely eliminate all fossil fuel emissions by 2050 which looks more unlikely day-by-day as the world is currently on a path of warming between 2 and 3 degree Celsius by 2100.

A 3-foot sea level rise, while heavily impacting Waikiki, would also greatly affect coastal Honolulu. With a 4-foot sea level rise, most of Waikiki as well as more than half of Kaka`ako would be under water. At a 6-foot sea level rise, much of Honolulu, Kaka`ako, Waikiki, and the shoreline extending easterly would largely cease to exist. Groundwater inundation could already flood these areas ahead of such SLR.

Water is the key to life. The Honolulu Board of Water Supply (BWS) has already experienced difficulty in repairing water main breaks along Ala Wai Boulevard, Ala Moana Boulevard and Nimitz Highway, having to wait for low tide to complete pipe repairs. What about other underground utilities such as sewer, electricity, etc.? Sea water intrusion into the underground storm drain system has already been documented at Beretania Street.

Infrastructure failure is presently already occurring during periods of high tides through storm-drain backflow (reverse gravity drainage flow through the underground municipal drainage system), traffic slowdowns along submerged roadways, and partial inundation of active cesspools exasperated through groundwater inundation (underground water table pushed to the surface). Almost 90% of the many cesspools still existing in Honolulu's 4-foot sea level rise zone are already largely inundated during present-day King tide events (sea level rise in excess of 1.15 feet or 0.35 meters) and even bi-monthly new and full moon high tides. Know where and when to swim. By the mid-2030s, Honolulu is expected to experience its first year with more than fifty high-tide floods (nuisance or sunny day floods above 1.15 feet or 0.35 meters sea level rise) when the moon's monthly new and full moon cycles will amplify rising sea levels caused by climate change.

While some coastal erosion could be contained by seawalls, they cannot stop flooding because of groundwater inundation during sea level rise and high tides that lift Oahu's caprock aquifer to the surface, which consists of brackish and polluted water that floats on a base of higher-density saltwater connected to the ocean. *Such polluted water will slowly turn into wetlands which will require costly engineering, where feasible, for municipalities to continue to function.*

Given these facts why and for whom are we still building high rises in the 4-foot sea level rise zone?

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